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ABSTRACT

As part of a larger study examining the relation between cognition and emotional understanding, 70 children in kindergarten and third, sixth, and ninth grades were interviewed about four dimensions of emotional understanding: knowledge, control, causality, and multiple feelings. Children were asked about each of these dimensions with regard to their own and their parents' feelings. A mixed model analysis of variance with grade and gender as between-groups variables and dimension and object of understanding as repeated measures revealed main effects for grade and object of understanding. A three-way interaction of grade by object of understanding by dimension also was found. Kindergarten children scored significantly higher on questions about the self than they did on questions about parents' feelings for all the dimensions except knowledge. Third graders showed no differences between questions about own and parents' feelings for any dimension. The self/parent difference reemerged for sixth graders for the knowledge dimension and continued for the ninth graders. Results supported the idea of structural differences in children's emotional cognition and the proposition that children at different ages understand feelings differently. It is suggested that these differences have direct bearing on psychopathology of and psychotherapy with children. (RH)

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Structural Differences in Emotional Understanding and their Application to Clinical Intervention[1]

Ellen D. Nannis

The salience of the role of cognitive processes in emotional development differs from theory to theory. In discussing the relation between cognition and affect, Piaget (1981) wrote that affect and cognition were inseparable, each necessary for the development of the other. Affect was viewed as the fuel for cognitive development and cognition was seen as providing the structure for affect by virtue of the cognitive schemes used to experience or interpret affect. Elaborating the links between cognition and emotional development would provide an important contribution to theory and also would have important clinical application.

Although there is great interest in the theoretical link between cognition and affect, there have been few empirical attempts to examine the two directly and even fewer attempts to examine the link in children. One notable exception is work recently published by Carroll and Steward (1984) in which the relation between cognitive level (as measured by tasks of classification and conservation) and level of emotional understanding (as measured by a semi-structured interview) was examined in children ranging in age from 4 to 9 years. Although a relation was found between children's performances on the cognitive tasks and their affective scores, the relation was not consistent, differing as a function of the child's age and the cognitive task employed.

One focus of recent research about cognition and emotion in children is emotional understanding -- that is, how children understand their emotional processes. Research by Harter (1977, 1978, 1980, 1984), Harris (in press), Harris & Olthof (1982) and Selman (1980), to name a few, demonstrated that children at different ages understand feelings differently. Explanations range from the use of external, concrete criteria for the youngest children, to the use of internal criteria, to the use of mentalistic cues for the oldest group of children. A frequent explanation for the differences is that they may relate to general changes in children's cognitive development (Harter, 1980, 1984; Selman, 1980).

Much of the current research about children's emotional understanding examines a single aspect of emotional understanding such as knowledge of feelings or explanations about the experience of multiple feelings. In an effort to examine how cognitive structure influences emotional understanding and experience more generally, it would be useful to ask children about many aspects of feelings. Further, in examining children's understanding of feelings, the issue of perspective has largely been ignored. Is is important to know, for example, whether children's understanding of others' feelings develops in a similar way to their understanding of their own feelings. This approach would

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yield a more global scheme of how children of different ages (and thus presumably different cognitive levels) think feelings work.

Method

As part of a larger study that examined the relation between cognition and emotional understanding, 70 children in grades kindergarten, three, six, and nine were interviewed about 4 aspects or dimensions, of emotional understanding; knowledge, control, causality and multiple feelings. Knowledge of feelings assessed the bases for inferring feelings such as "How do you know you are happy?" Control of feelings, involved children's ideas about the ability to willfully manipulate feelings. An example of this would be: "Can you hide your feelings? Can you pretend to be happy?" The third dimension (Causality) dealt with children's ideas of how feelings start, (e.g., "How do you get to be happy?") Finally, the fourth dimension addressed questions about how children explained multiple feelings such as, "Can you be angry and loving at the same time?"

Children were asked about each of these dimensions with regard to their own and their parents' feelings. Interviews were coded according to a modification of a coding system used in a previous study. Development of the coding system and the coding criteria are described elsewhere (Nannis and Cowan, 1983). However, let me briefly describe the criteria.

There were five levels of responses for each dimension. Levels were designed to be comparable across dimension. Level 0 was used when the response was uncodeable or the child said s/he did not know the answer. All Level 1 responses regardless of coding dimension, involved explanations of feelings based on external or tangible qualities. (e.g., I know I'm happy because I'm smiling" or: "My happy feelings start when I start smiling.") Level 2 responses included the general notion that feelings were internal phenomena, though tied to a concrete object, usually a body part or organ. (e.g.,"I know I'm happy because my heart tells me.") Level 3 responses were based on the idea that feelings were internal and diffuse, and also included the notion that an individual had some control over the experience or presentation of feelings, (e.g., "I can hide happy feelings by trying not to show them, by keeping them inside.") Level 4 responses explained that feelings were part of a scientific (e.g., biological, psychological, or physiological) system with universal laws or principles governing how feelings "work". (e.g.,"I get to feel happy the same way anyone does. Something happens. That sends a message to my brain which causes a release of adrenalin ...")

Questions for feelings in the self and the parent, for each dimension were coded separately. Many children used a range of response levels to a specific question. Because the study examined the level at which children were capable of responding, each specific question was coded for the highest level of reasoning evidenced.

Ratings of interviews were done by two different raters, each naive to the research hypotheses of the study. Raters were in agreement between 78% and 100% of the time (mean = 84%).

Results

I will report the results in a somewhat cursory way because I want to have enough time to focus on the clinical aspects of this work.

The first part of the data analysis was frequency counts for responses to each dimension with regard to feelings in the self and in the parent. Kindergarten children answered questions primarily at levels 0 and 1; 3rd and 6th graders primarily at levels 2 and 3, with more 3rd graders using level 2 responses and more 6th graders using level 3 rather than level 2 responses. Ninth graders primarily responded at level 3 with some level 4 responses. The clear pattern is that as children get older, lower level responses drop out and the use of higher level responses increases. Although older children may also employ lower level responses, they are capable, when probed, of using higher level responses. Younger children, when probed, appear unable to respond at the higher levels.

The major analysis in the study was a mixed model ANOVA with grade and gender as the between groups variables and dimension and object of understanding (self/parent) as repeated measures. Main effects for grade ($F=7.15$, $df=3,66$, $p < .001$) and object of understanding were found ($F=5.11$, $df=1,66$, $p < .01$). There were no main effects for gender or dimension. A three way interaction of grade by object of understanding by dimension also was found. ($F=1.71$, $df=18,56$, $p<.05$) Kindergarten children scored significantly higher for questions about the self as compared to questions about the parents' feelings for all the dimensions <u>except</u> knowledge. Third graders showed no differences between questions about one's own and one's parents feelings for any dimension. The self/parent difference reemerged for sixth graders for the knowledge dimension and continued for the ninth graders. Interpretation of these data, particularly the interaction would involve a lengthy theoretical discussion about the development of knowledge. Because the focus of this symposium is clinical applications of research, I will leave the theoretical discussion for another time.

Generally, then, one can describe children's global understanding of feelings in the following way.

Kindergarten children (ages 5-6) tend to explain and understand feelings primarily as concrete and external phenomena related to the presence or absence of a specific object or facial expression.

I: How do you know you're happy?

S: I have a smile.

I: Could you be sad and have a smile on?

S: No way, I'd frown.

I: Could by be fooling?

S: You can't fool someone about that.

I: How come?

S: Because <u>I have a smile on</u>.

Feelings change by changing the facial expression or the specific object that caused the feeling. Because feelings are the concrete, external object, they cannot be pretended or hidden. If the smile is not present, the child is not happy. Children at this age believe that they could have multiple, simultaneous feelings only if facial expression could occur simultaneously, such as crying and smiling.

Kindergarten children were more likely to use external criteria in their explanations of feelings in others even if they employed more internal explanations about their own feelings.

Third graders (ages 8-9) used concrete cues in their explanations of feelings with an increasing tendency to use internal though still concrete cues. For example, in explaining causality, they explained, "I get to be happy by my brain telling me happy things." In explaining the ability to control feelings (hide or pretend feelings) and to experience multiple feelings, third grade children viewed feelings almost exclusively as internal concrete phenomena. They felt that feelings could be hidden, though were skeptical as to whether they could be feigned. Their notions of whether feelings could be experienced simultaneously was explained in terms of whether feelings could "mix" or in terms of sequential rather than simultaneous experience of feelings.

Sixth grade children understood that feelings were internal experiences; their explanations varied in the degree to which abstract notions were used. An example would be: "I know I am happy because I feel a tightness in my stomach". Many of the sixth graders were likely to assume volition in controlling feelings, such as "I try not to show my feelings." For the knowledge dimension sixth graders appeared to understand feelings in themselves differently than feelings in their parents. They frequently responded something like: "I don't know what my mom is feeling unless she tells me." By sixth grade, children seemed aware that others had emotional experiences but the children had yet to develop a set of rules or principles explaining the others' experiences.

For the most part, ninth graders understood feelings as internal and intangible phenomena. Some saw emotions as part of a scientific area of study, referring to feelings using biological, psychological or physiological terms. For example, some explained the causality of feelings as resulting from a hormonal, neurochemical or neurophysical reaction. About 20% began to invoke universal principles about feelings. For example, when asked about the ability to hide feelings a ninth grader said, " My parents hide their feelings the same way I do --the same way anyone does--you try not to show them you keep your feelings inside and put on a different expression."

For the knowledge dimension, ninth graders responded to knowledge of their own feelings primarily using internal abstract cues and scientific explanations. However, like sixth graders, some were perplexed by the question of inferring feelings in another. Unless someone told you their feelings it was difficult to truly know about another's experiences. The quandary of these adolescents appeared to be an epistomological question--how did they truly know and gain information about another.

Discussion

When one discusses either social or emotional knowledge from a cognitive developmental perspective, the first major issue that is raised usually is: Are we talking about stages of development? That question is difficult to answer. We have strong evidence that the levels of responses are age related. They also appear to be qualitively different from each other. One major issue, however, is that of whether each stage represents a structured whole. Here the issue of consistency of use among the dimensions comes into play. A three-way interaction of grade by object of understanding by dimension suggests that response levels to the different dimensions vary in their consistency both as a function of the object of inquiry and the grade level of the child. Thus depending upon how the issue of stability and inconsistency among dimensions is resolved, the answer to whether stages can be documented will fall into place. This issue of how to interpret consistency and inconsistencies is the object of current debate. I will not address it now. (Fischer & Silvern, 1984, Turiel and Davidson, in press).

In the broadest interpretation, one might be willing to assert that in light of other research as well as the present research, the idea of structural differences, be they levels or stages, in children's emotional cognition is supported. At the very least empirical evidence supports the idea that children at different ages, thus, presumedly different cognitive stages, understand feelings differently from one another. These differences have direct bearing on our understanding of psychopathology and intervention. They mean, for instance, that when exposed to a similar stressful event, children at different ages, and thus presumed different cognitive levels, may be attending to or internalizing very different things. The meaning children place on the events may be very different. This in part could account for why members of a family may be differentially affected by a particular stressful event, and thus why the therapeutic intervention may need to address very different matters. For example, with a family undergoing divorce, it might be appropriate to deal with issues of ambivalence for older children whose psychic pain may come from the war of feelings from within. However, because younger children's feelings are linked to the concrete representations or manifestations of the feelings, a younger child's distress may come from whether s/he has a bed anywhere--a far more concrete and immediate concern. Thus, one may want to deal more with the logistics of divorce as a way of dealing with the emotional distress rather than trying to address the feelings directly and abstractly. Where talk of feelings becomes important in the intervention, drawings or other concrete representations will be important therapeutic tools.

A second example comes from work with chronically ill children. In treating children who are beginning chemotherapy for cancer, my experience has been that the younger children seemed more troubled by the question: "Will it hurt?"--a present-oriented concern, whereas the older children with their abilities to project themselves in the future, were more concerned with, "Will it work?" Thus the psychological issues that need to be addressed differ for children of different ages. This difference probably can be related to the child's cognitive capacities in dealing with the situation.

The issue of cognitive stages or levels also becomes important in the use of cognitive therapies with children. It may be that these therapies are most effective with older children, age 8 and older.

Research cited by Cohen and Schleser (1984) in a chapter about cognitive development and clinical interventions suggests that preoperational thinkers remember fewer pieces of information, do not spontaneously use rehersal, and seem not to use mnemonic aids or conceptual cues to remember information. Concrete thinkers (about age 7 or 8) are only moderately facile at these abilities. Keeney, Cannuzo and Fivell (1967) were able to train 6 and 7 year olds to use verbal rehearsal, however, when given an option of whether or not to use rehearsal in a new task 59% chose not to. The kinds of verbal rehearsal, self cuing, memory and logical problem solving skills that seem the hallmark of cognitive behavioral therapies need to be adapted for younger children. One frequently suggested modification is to use modeling techniques (e.g., Kendall and Morison, 1984). However, it is unclear what children internalize from the modeling experience nor is the ability to generalize to other situations well documented.

It may be that by modifying the therapeutic environment, cognitive-behavioral techniques can be successful with younger children. Such modification could entail, for example, a greater use of "props" than is normally used in cognitive behavioral therapy. Using props, better known as play therapy - might entail teaching cognitive strategies to dolls or puppets. Use of play capitalizes on the perceptual mode of understanding, while allowing children to develop some cognitive behavioral strategies appropriate for a given situation. It does not require abstraction or a great deal of memory. The strategies comes from the child with certain strategies modified by the therapist rather than from a model to be copied. In other words, I am talking about a situation emphasizing requiring more assimilation than accomodation. I recognize that this is a not a panecea but a suggestion for certain therapeutic problems.

Finally, the results of the present study provide some direction to therapists in terms of the language for intervention--that is, the general ways in which children of different cognitive stages discuss their feelings and understand discussions of feelings. For example, if we are working with parents of a preschooler about communicating positive affect towards their child, we need to stress the importance of smiling or using other gestures rather than only communicating verbally. This is because we know that at this age a child knows one is happy by the facial expression.

It also appears from the present research and Harter's work that the ability to talk about what we clinically call "ambivalence" that is, the simultaneous presence of two conflicting feelings, may be possible only for much older children. For 7 year olds who understand multiple feelings as a sequential rather than simultaneous event, "resolving one's ambivalence" becomes a task of allowing that at "time one" you can feel happy and at "time two" you can feel sad. This does not suggest that the child cannot <u>experience</u> ambivalence but rather that this is how the child both communicates and understands the experience.

Let me conclude by saying that the research being done on emotional understanding is only one part of the link between cognitive and emotional development. The way one takes in emotional information will influence one's emotional state and behavior. That children at different ages may use different cognitive structures to process emotional information suggests that the emotional information that becomes the basis for further emotional development may be very different at different ages. Although this may be an over simplification, what it does suggest is that in formulating cognitive theories of emotional development we may need a developmental theory of development; a theory that incorporates the influence of developing and changing cognitive structures.

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